

GENERAL STRUCTURAL NOTES

1. ALL WORK TO BE DONE IN ACCORDANCE WITH THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE. VUBC (2006 EDITION) EFFECTIVE MAY 1, 2006.
- NO LOADS IN EXCESS OF THE DESIGN LIVE LOADS LISTED SHALL BE IMPOSED UPON ANY AREA DURING CONSTRUCTION, UNLESS ADEQUATE SHORING OR OTHER MEANS IS PROVIDED TO SUPPORT THE EXCESSIVE LOADS.
- IF ANY CHANGES ARE MADE IN WEIGHT AND/OR LOCATION OF POINTS OF SUPPORT OF EQUIPMENT, THE CONTRACTOR SHALL FURNISH DETAILS OF CHANGES TO THE ARCHITECT FOR REVIEW AND NECESSARY MODIFICATIONS.
- TEMPORARY BRACING, GUY WIRES, SHORINGS, ETC., SHALL BE USED AS NECESSARY TO RESIST ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED DURING CONSTRUCTION, INCLUDING EQUIPMENT AND ITS OPERATION.
- THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. THE ERECTION PROCEDURE AND SEQUENCE INCLUDING THE DESIGN ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC., IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- DRAWINGS DO NOT SHOW ALL OPENINGS, COORDINATE WITH MECHANICAL DRAWINGS. VERIFY SIZES AND LOCATIONS OF ALL OPENINGS WITH MECHANICAL.
- REFER TO ARCHITECTURAL DRAWINGS FOR WATERPROOFING DETAILS.
- THE ENGINEER SHALL NOT HAVE THE AUTHORITY OR RESPONSIBILITY TO SUPERVISE OR DIRECT THE CONSTRUCTION WORK.
- ALL SECTIONS AND DETAILS, WHETHER EXPLICITLY CUT ON PLAN OR NOT, SHALL BE CONSIDERED TYPICAL AND SHALL APPLY AT SIMILAR CONDITIONS.
- INFORMATION REGARDING STRUCTURAL MEMBERS INDICATED TO BE EXISTING WAS OBTAINED FROM LIMITED AVAILABLE EXISTING DRAWINGS. ACTUAL CONDITIONS MAY DIFFER FROM THAT WHICH IS INDICATED. IF THE CONTRACTOR UNCOVERS EXISTING CONDITIONS THAT DIFFER FROM THAT WHICH IS INDICATED ON PLAN, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD OF THE DISCREPANCY IN ORDER THAT THE CONDITION MAY BE RESOLVED.
- FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO THE CONSTRUCTION AND FABRICATION OF ANY NEW STRUCTURAL MEMBERS.
2. SPECIAL INSPECTIONS ARE REQUIRED BY THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE (CHAPTER 17). REFER TO SECTION 014000 OF THE SPECIFICATIONS FOR THE GENERAL INSPECTION REQUIREMENTS. THE FOLLOWING IS A LIST OF ITEMS THAT REQUIRE SPECIAL INSPECTION. REFER TO THE REFERENCED SPECIFICATION SECTION FOR THE SPECIFIC REQUIREMENTS FOR EACH ITEM. THE INDEPENDENT INSPECTION AGENCY, ENGAGED BY THE OWNER, SHALL REVIEW THE TEST PROCEDURES AND INSPECTIONS WITH THE STRUCTURAL ENGINEER OF RECORD, THE GENERAL CONTRACTOR, AND THE OWNER PRIOR TO CONDUCTING TESTS AND INSPECTIONS.
- A. EARTHWORK SECTION 312000
B. CAST-IN-PLACE CONCRETE SECTION 033000
C. UNIT MASONRY SECTION 042000
D. STRUCTURAL STEEL FRAMING SECTION 051200
3. SHOP DRAWINGS: THE CONTRACTOR SHALL COORDINATE THE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL REQUIREMENTS WITH THE STRUCTURAL DRAWINGS, INCLUDING THE LOCATION OF MISCELLANEOUS ITEMS AFFECTING THE STRUCTURAL WORK SUCH AS OPENINGS, BENT PLATES, INSERTS, ETC. PROMPTLY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR OMISSIONS.
- THE CONTRACTOR SHALL VERIFY ALL FLOOR AND ROOF MOUNTED MECHANICAL EQUIPMENT DIMENSIONS AND WEIGHTS, AND VERIFY ALL ROOF OPENING SIZES AND LOCATIONS, WITH ARCHITECTURAL AND MECHANICAL DRAWINGS AND REVIEWED SHOP DRAWINGS.
- SHOP DRAWINGS ARE TO BE REVIEWED BY THE CONTRACTOR AND SUBCONTRACTOR PRIOR TO BEING SUBMITTED FOR APPROVAL.
4. DESIGN LOADS
- A. BUILDING CLASSIFICATION (TABLE 1604.5)
CATEGORY III
- B. LIVE LOADS
- ROOF 20 PSF
FLOOR 50 PSF + 20 PSF PARTITIONS
LOBBIES (MAIN FLOOR) 100 PSF
STORAGE 125 PSF
- LIVE LOAD REDUCTION (NOT USED)
ROOF LIVE LOAD REDUCTION (NOT USED)
- C. SNOW LOADS
- PG=15 PSF (GROUND SNOW)
CE=1.0 (SNOW EXPOSURE FACTOR)
CT=1.0 (THERMAL FACTOR)
IS=1.1 (SNOW LOAD IMPORTANCE FACTOR: ASCE 7-05 TABLE 7-4)
PF=0.7X(CE)X(CT)X(IS)X(PG)SNOW LOAD FOR LOW-SLOPE ROOF)
0.7X1.0X1.0X1.1X15 = 11.6 PSF
- RAIN-ON-SNOW SURCHARGE (LOW-SLOPE ROOFS ONLY WHERE $P_g < 20$ PSF) = 5.0 PSF
TOTAL (LOW-SLOPE ROOF) = 11.6 PSF + 5.0 PSF = 16.6 PSF
MINIMUM PF (LOW-SLOPE ROOF WHERE $P_g < 20.0$ PSF) =
(PS)(IS) = 15.0X1.1 = 16.5 PSF
USE 20 PSF MINIMUM
- D. WIND LOADS
- V=100 MPH (BASIC WIND SPEED; 3-SECOND GUST)
IW=1.15 (WIND IMPORTANCE FACTOR: ASCE 7-05 TABLE 6-1)
EXPOSURE B
KD=0.85 (WIND DIRECTIONALITY FACTOR)
KZT=1.0 (TOPOGRAPHIC FACTOR)
GCPI=±0.16 (ENCLOSED BUILDING)
- WIND LOAD DETERMINATION BY:
ASCE 7-05, SECTION 6.5, METHOD 2 (ANALYTICAL PROCEDURE)
- COMPONENTS AND CLADDING LOADS
(FOR FABRICATOR DESIGNED COMPONENTS)
- E. SEISMIC LOADS
- OCCUPANCY CATEGORY = III
IE=1.25 (ASCE 7-05 TABLE 11.5-1)
SEISMIC SITE CLASS = D
SS=13.9%
S1=5.0%
FA=1.60
FI=2.40
SMS=(FA)X(SS)=(1.60)X(13.9) = 22.2%
SM1=(FI)X(S1)=(2.40)X(5.0) = 12.0%
SDS=(2/3)X(SMS) = 14.8%
SD1=(2/3)X(SM1) = 8.0%
- SEISMIC DESIGN CATEGORY = B
- BASIC STRUCTURAL SYSTEM:
BEARING WALL SYSTEMS
- SEISMIC- FORCE- RESISTING SYSTEM:
ORDINARY PLAIN MASONRY SHEAR WALLS
- R= (RESPONSE MODIFICATION FACTOR)= 1.5
Ω= (SYSTEM OVERSTRENGTH FACTOR)= 2.5
CD= (DEFLECTION AMPLIFICATION FACTOR)= 2.25
- ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE METHOD
CS = 12.3 %
SEISMIC BASE SHEAR = 139 KIPS

- E. CONCENTRATED LOADS (OVER 2.5'X2.5' AREA):
2000 POUNDS - OFFICES
300 POUNDS - SCUTTLERS, SKYLIGHT RIBS, AND CEILING ACCESS
5. ALL CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301-05 "SPECIFICATIONS FOR STRUCTURAL CONCRETE" AND ACI 318-05 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".
- $f'_c=3600$ PSI (SLABS-ON-GRADE AND ELEVATED SLABS)
 $f'_c=3000$ PSI (ALL OTHER CONCRETE)
ASTM A615 GRADE 60 (TYPICAL REINFORCING STEEL)
ASTM A706 (REINFORCING STEEL AT WELDED CONDITIONS)
ASTM A105 (WELDED WIRE FABRIC - USE FLAT SHEETS ONLY)
- REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION AND EXTENT OF DEPRESSIONS FOR SPECIAL FLOOR COVERINGS.
- REFER TO SPECIFICATIONS FOR FINISHES.
6. ALL MASONRY WORK SHALL CONFORM TO THE REQUIREMENTS OF (ACI 530-05/ASCE 5-05/TMS 402-05) "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" AND (ACI 530.1-05/ASCE 6-05/TMS 602-05) "SPECIFICATION FOR MASONRY STRUCTURES.
- ASTM C90 (BLOCK)
ASTM C270 (MORTAR) - TYPE S (CMU), TYPE N (BRICK)
ASTM C476 (GROUT)
FM=1500 PSI
ASTM A615 GRADE 60 (REINFORCING)
- SOLIDLY FILL COLLAR JOINTS WITH MORTAR AS THE WORK PROGRESSES.
- PROVIDE STEEL SLEEVES AT PIPE PENETRATIONS (GALVANIZED AT EXTERIOR WALLS AND ALL BELOW GRADE WALLS).
- GROUT ALL CELLS OF FOUNDATION WALLS SOLID UP TO FINISH GROUND FLOOR.
- AT HOLLOW WALLS THAT CHANGE IN THICKNESS OR NUMBER OF WHYES, PROVIDE A COURSE OF SOLID MASONRY OR GROUT FILLED UNITS BELOW THE TRANSITION.
- ALL BLOCK CONTAINING VERTICAL REINFORCING SHALL HAVE TWO CELLS PER 16" BLOCK. CELLS SHALL ALIGN VERTICALLY. BARS SHALL BE HELD IN PLACE BY REBAR POSITIONERS OR OTHER SUITABLE DEVICES.
- IN VERTICALLY REINFORCED WALLS, USE LADDER TYPE (NOT TRUSS TYPE) REINFORCING IN HORIZONTAL MORTAR JOINTS.
- REFER TO SPECIFICATION FOR GROUT SLUMP. PLACE GROUT PER ACI 530.1 SECTION 3.5 AND CONSOLIDATE BY VIBRATION. RECONSOLIDATE BY VIBRATION AFTER INITIAL WATER LOSS AND SETTLEMENT.
7. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE REQUIREMENTS OF AISI 360-05 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS". BOLTED CONNECTIONS SHALL BE TIGHTENED TO A SNUG TIGHT CONDITION UNLESS NOTED OTHERWISE ON PLAN. REFER TO DRAWINGS FOR CONNECTIONS. IF CONNECTIONS ARE NOT SHOWN, FABRICATOR SHALL DESIGN CONNECTIONS FOR BEAM UNIFORMLY LOADED TO CAPACITY.
- ASTM A992 (W-SHAPES) FY = 50 KSI
ASTM A500 GRADE B (SQUARE AND RECTANGULAR HSS SHAPES) FY = 46 KSI
ASTM A36 (ANGLE, CHANNELS, PLATES, AND OTHER STRUCTURAL SHAPES) FY = 36 KSI
E70XX (SMAW PROCESS WELDING)
E6022 (METAL DECK TO OWSJ OR STRUCTURAL STEEL - SMAW PROCESS)
E80XX (A706 REBAR)
ASTM A325-N (BOLTS)
ASTM A563 (HEAVY HEX NUT)
ASTM F436 (HARDENED STEEL WASHER)
ASTM F1554 FY=36 KSI (ANCHOR RODS UNO)
- DETAILING AND ERECTION OF STRUCTURAL STEEL AND OPEN WEB STEEL JOISTS SHALL COMPLY WITH CURRENT OSHA STANDARDS FOR THE CONSTRUCTION INDUSTRY-SUBPART R - STEEL ERECTION.
- CONTRACTOR SHALL PROVIDE FIELD CURED SAMPLES OF CAST-IN-PLACE CONCRETE IN FOOTINGS, PIERS, AND WALLS AND PRISMS OF MASONRY PIERS AND WALLS IN ACCORDANCE WITH OSHA SECTION 1926.752 TO DETERMINE THAT CONCRETE AND MASONRY HAVE ACHIEVED A MINIMUM OF 75% OF DESIGN STRENGTH PRIOR TO THE COMMENCEMENT OF STEEL ERECTION.
- FABRICATOR SHALL PROVIDE CHANNELS, ANGLES, ETC., AS REQUIRED FOR STEEL DECK BEARING AT LOCATIONS WHERE TOP OF STRUCTURAL MEMBERS ARE NOT AT DECK BEARING ELEVATION. REFER TO DETAILS.
8. ALL OPEN WEB STEEL JOIST WORK SHALL CONFORM TO THE S.J.I. "STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS". OPEN WEB STEEL JOISTS ARE NOT DESIGNED FOR CONCENTRATED LOADS EXCEPT AT PANEL POINTS. WHEN HANGING OR SETTING LOADS EXCEEDING 300 POUNDS, EITHER PLACE THE LOAD AT A PANEL POINT OR FIELD WELD AN L2X2X $\frac{3}{8}$ ANGLE FROM THE POINT OF THE LOAD TO THE NEAREST PANEL POINT ON THE OPPOSITE CHORD.
- DESIGN JOISTS FOR 250 POUND CONCENTRATED SERVICE LOAD AT ALL DIAGONAL STRUTS FRAMING TO JOIST CHORDS, UNLESS NOTED OTHERWISE.
- IF EXISTING JOIST BRIDGING IS INTERRUPTED, PROVIDE STEEL BRIDGING TERMINATION PER TYPICAL DETAIL ON 54.1
- DETAILING AND ERECTION OF STRUCTURAL STEEL AND OPEN WEB STEEL JOISTS SHALL COMPLY WITH CURRENT OSHA STANDARDS FOR THE CONSTRUCTION INDUSTRY-SUBPART R - STEEL ERECTION.

9. FOUNDATIONS FOR THIS STRUCTURE ARE SPREAD FOOTINGS BEARING ON EITHER VIRGIN SOIL OR CONTROLLED COMPACTED FILL WITH AN ASSUMED SOIL BEARING CAPACITY OF 1500 PSF.
- THE OWNER'S GEOTECHNICAL ENGINEER SHALL VERIFY, PRIOR TO POURING CONCRETE, THAT THE SOIL IS CAPABLE OF SUPPORTING SUCH A LOAD.
- THE CONTRACTOR SHALL PROTECT THE FOOTINGS AND SLABS FROM DAMAGE FROM FROST HEAVE DURING CONSTRUCTION UNTIL THE FINAL DESIGN STRUCTURE IS COMPLETE.
- STEPS IN WALL FOOTINGS SHALL HAVE A MINIMUM SPACING OF DOUBLE THE CHANGE IN ELEVATION.
- BACKFILL AGAINST WALLS SPANNING VERTICALLY BETWEEN FLOORS SHALL NOT BE PLACED UNTIL BOTH FLOORS ARE IN PLACE AND CONCRETE HAS REACHED 75% OF ITS 28-DAY STRENGTH.
- AT NON-RETAINING WALLS BELOW GRADE, BACKFILL AGAINST BOTH SIDES OF WALL SIMULTANEOUSLY SO THAT GRADE DIFFERENCE IS NO MORE THAN 1'-0" AT ANY TIME.
10. ALL POST-INSTALLED ANCHORS (IN CONCRETE OR CMU) ARE TO BE INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS (INCLUDING BUT NOT LIMITED TO DRILL BIT SIZE, PROPER CLEANING OF HOLES, INSTALLATION TORQUE, AND TEMPERATURE CONSTRAINTS).
- WHEN A SPECIFIC PRODUCT AND MANUFACTURER IS REFERENCED IN THE CONTRACT DOCUMENTS, THAT SPECIFIC PRODUCT SHALL BE USED UNLESS THE CONTRACTOR SUBMITS A REQUEST FOR A PRODUCT SUBSTITUTION OF AN ANCHOR WITH EQUIVALENT RESISTANCE VALUES IN THE APPROPRIATE BASE MATERIAL. ALL REQUESTS FOR SUBSTITUTION SHALL INCLUDE PRODUCT SPECIFICATIONS AND DESIGN DATA FOR REVIEW BY THE STRUCTURAL ENGINEER OF RECORD (DMWPV). CONTRACTOR SHALL SUBMIT CALCULATIONS DEMONSTRATING PROPOSED SUBSTITUTION IS EQUAL TO APPROVED PRODUCTS.
- THE ANCHOR MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING THE INITIAL INSTALLATION OF EACH TYPE OF ANCHOR TO REVIEW AND APPROVE OF THE CONTRACTOR'S INSTALLATION PROCEDURES. THE OWNER'S TESTING AGENCY SHALL ALSO OBSERVE THE INITIAL INSTALLATION OF EACH ANCHOR TYPE, AND PROVIDE THE INSPECTION OF ALL ANCHORS DURING INSTALLATION TO VERIFY CONFORMANCE WITH THE MANUFACTURER'S INSTALLATION RECOMMENDATIONS. SUBMIT REPORT FROM MANUFACTURER'S REPRESENTATIVE FOR DMWPV REVIEW.
- FASTENERS GENERALLY REFERRED TO AS "SCREW ANCHOR" ON THE DRAWINGS SHALL BE ONE OF:
- HUS-H BY Hilti
 - TITEN HD BY SIMPSON STRONG-TIE ANCHOR SYSTEMS
 - WEDGE BOLT OT BY POWERS FASTENERS
- FOR THESE SCREW ANCHORS LISTED, USE STANDARD ANSI DRILL BIT (NO SPECIAL BIT REQUIRED). PROVIDE HOLES IN STEEL MEMBERS $\frac{1}{8}$ " LARGER THAN NOMINAL DIAMETER OF ANCHOR. FOR TITEN HD & WEDGE BOLTS PROVIDE HOLE IN STEEL MEMBER $\frac{1}{8}$ " LARGER THAN THE NOMINAL DIAMETER ANCHOR FOR HILT HUS-H
- CHEMICAL ANCHORING SYSTEMS GENERALLY REFERRED TO AS "EPOXY" ANCHORING SYSTEMS SHALL BE ONE OF:
- SET HIGH STRENGTH EPOXY BY SIMPSON STRONG TIE ANCHOR SYSTEMS
 - HIT-RE 500 EPOCH BY HILTI
- THREADED ROD ANCHORS USED WITH THESE SYSTEMS SHALL BE STANDARD STRENGTH STEEL ROD (ASTM A36) UNLESS NOTED OTHERWISE. REINFORCING STEEL USED WITH THESE SYSTEMS SHALL COMPLY WITH ASTM A615 GRADE 60.
11. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL
- THIS SYMBOL INDICATES THE OCCURRENCE OF STEEL EXPOSED IN THE FINISHED WORK. CONFORM TO SPECIFICATIONS GOVERNING SPECIAL PROCEDURES FOR FABRICATION, ERECTION, FIELD PREPARATION, AND FINISH. GRIND VISIBLE WELDS AND ROUGH EDGES SMOOTH FOR SHOP AND FIELD FABRICATION AND INSTALLATION. UNLESS OTHERWISE DETAILED, NO VISIBLE BOLTED CONNECTIONS SHALL BE PERMITTED.
- ALL CONNECTIONS AND FABRICATIONS OF COMPONENTS EXPOSED AND VISIBLE IN THE FINISHED WORK SHALL BE MADE WITH CONTINUOUS WELDS. INTERMITTENT WELDS ARE ACCEPTABLE FOR NON-EXPOSED OR NON-VISIBLE CONDITIONS. WELD SIZE SHALL BE AS REQUIRED FOR STRUCTURAL STRENGTH, BUT NOT LESS THAN $\frac{1}{8}$ " FILLET.
- HOLES BURNED THROUGH EXPOSED STEEL ROOF OR FLOOR DECK DURING WELDING SHALL NOT BE ALLOWED. REPLACEMENT OF DECK IS REQUIRED.
12. ALL STRUCTURAL COLD-FORMED METAL FRAMING THAT ARE EXTERIOR ELEMENTS SHALL CONFORM TO THE 145-01 "NORTH AMERICAN SPECIFICATION FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, INCLUDING 2004 SUPPLEMENT" BY AMERICAN IRON AND STEEL INSTITUTE (AISI). ALL STUDS, JOISTS, AND ACCESSORIES SHALL BE GALVANIZED STEEL WITH THE TYPE, SIZE, GAUGE, AND SPACING INDICATED ON THE DRAWINGS. ALL MEMBERS WITHOUT A DESIGNATED SIZE ON THE DRAWINGS SHALL BE DESIGNED BY A LIGHT GAUGE STEEL SPECIALTY ENGINEER REGISTERED IN THE COMMONWEALTH OF VIRGINIA. PROVIDE CALCULATIONS AND SHOP DRAWINGS FOR DMWPV REVIEW ACCORDING TO SPECIFICATION SECTION 054000.
- DESIGN MINIMUM YIELD STRENGTHS ARE AS FOLLOWS:
- fy=33 KSI FOR 54, 43 AND 33 MIL THICKNESS
fy=50 KSI FOR 97 AND 68 MIL THICKNESS
- PUNCH OUTS SHALL NOT BE LOCATED WITHIN 10" OF END OF MEMBER OR INSIDE FACE OF SUPPORT. PROVIDE BRIDGING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS - NOT TO EXCEED 4'-0" OC IN VERTICAL WALL STUDS.
- PDF = POWDER DRIVEN FASTENER = 0.145" DIA UNO
- USE NO. 10 SCREWS (MINIMUM SIZE) IN ALL CONNECTIONS OF LIGHT GAUGE STEEL STRUCTURAL MEMBERS UNLESS NOTED OTHERWISE.

13. EXISTING CONSTRUCTION IS DENOTED USING SLANTED LETTERING, PHANTOM LINETYPE (DASH DOUBLE DOT), AND LIGHTER LINE WEIGHT.
14. ABBREVIATIONS
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|-------|----------------------------------|-------|---------------------------|
| AB | = ANCHOR BOLT | JBE | = JOIST BEARING ELEVATION |
| AF | = ABOVE FINISHED FLOOR | JT | = JOINT |
| APC | = ARCHITECTURAL PRECAST CONCRETE | LB6 | = POUNDS |
| ARCH | = ARCHITECTURAL | LSBT | = LIGHT GAGE STEEL TRUSS |
| BLDG | = BUILDING | LL | = LIVE LOAD |
| BM | = BEAM | LLH | = LONG LEG HORIZONTAL |
| BOT | = BOTTOM | LLV | = LONG LEG VERTICAL |
| BRG | = BEARING | LSH | = LONG SIDE HORIZONTAL |
| CANT | = CANTILEVER | LSV | = LONG SIDE VERTICAL |
| CIP | = CAST-IN-PLACE | LVL | = LAMINATED VENEER LUMBER |
| CJ | = CONTROL JOINT | LW | = LIGHT WEIGHT |
| CLG | = CEILING | MAS | = MASONRY |
| CLR | = CLEAR | MAX | = MAXIMUM |
| CMU | = CONCRETE MASONRY UNIT | MECH | = MECHANICAL |
| COL | = COLUMN | MFR | = MANUFACTURER |
| CONC | = CONCRETE | MISC | = MISCELLANEOUS |
| CONN | = CONNECTION | MIN | = MINIMUM |
| CONT | = CONTINUOUS | NO. | = NUMBER |
| COORD | = COORDINATE | NOT | = NOT IN CONTRACT |
| DIA | = DIAMETER | NTS | = NOT TO SCALE |
| DAG | = DIAGONAL | OP | = OPPOSITE |
| DM | = DIMENSION | OPH | = OPPOSITE HAND |
| DL | = DEAD LOAD | OWSJ | = OPEN WEB STEEL JOIST |
| DN | = DOWN | PDF | = POWDER DRIVEN FASTENER |
| DWG | = DRAWINGS | PL | = PLATE |
| EACH | = EACH | PLF | = POUNDS PER LINEAR FOOT |
| EJ | = EXPANSION JOINT | POJ | = PLANE OF JOIST |
| EL | = ELEVATION | PSF | = POUNDS PER SQUARE FOOT |
| ELEV | = ELEVATOR | PSI | = POUNDS PER SQUARE INCH |
| EDS | = EDGE OF SLAB | REF | = REFERENCE |
| EQ | = EQUAL | REINF | = REINFORCING |
| EQUIP | = EQUIPMENT | REQD | = REQUIRED |
| EXIST | = EXISTING | SIM | = SIMILAR |
| EW | = EACH WAY | SOG | = SLAB-ON-GRADE |
| EXP | = EXPANSION | SPA | = SPACE |
| EXT | = EXTERIOR | STD | = STANDARD |
| FFE | = FINISHED FLOOR ELEVATION | STIFF | = STIFFENER |
| FLR | = FLOOR | TBE | = TRUSS BEARING ELEVATION |
| FLT | = FLAT BAR | T&B | = TOP AND BOTTOM |
| FRT | = FIRE RETARDANT TREATED | T&G | = TONGUE AND GROOVE |
| FTG | = FOOTING | TOS | = TOP OF STEEL |
| GA | = GAUGE | TYP | = TYPICAL |
| GALV | = GALVANIZED | UNO | = UNLESS NOTED OTHERWISE |
| GC | = GENERAL CONTRACTOR | VERT | = VERTICAL |
| GT | = GRIDER TRUSS | WCJ | = WALL CONTROL JOINT |
| HK | = HOOK | WT | = WEIGHT |
| HORIZ | = HORIZONTAL | WWF | = WELDED WIRE FABRIC |
| HS | = HIGH STRENGTH | (H) | = HIGH |
| HT | = HEIGHT | (L) | = LOW |
| INT | = INTERIOR | | |
15. EXISTING BUILDING STRUCTURE HAS BEEN EVALUATED IN THE FOLLOWING LIMITED MANNER:
- ROOF FRAMING MEMBERS THAT SUPPORT NEW GRAVITY LOADS HAVE BEEN ANALYZED TO SUPPORT THESE NEW LOADS IN ADDITION TO ALL CURRENT CODE PRESCRIBED GRAVITY LOADS. ALL NEW GRAVITY LOADS ARE LOCATED IN TWO PLACES. AT THE GLENN CAMPUS, NEW LOADS OCCUR AT THE NEW ROOF TOP UNIT AND AT THE CANOPY. AT THE WARSAW CAMPUS, NEW LOADS ONLY OCCUR AT THE CANOPY. ALL OTHER ROOF FRAMING OUTSIDE THESE AREAS HAS NOT BEEN RE-ANALYZED.
 - EXISTING BUILDING LATERAL FORCE RESISTING SYSTEM APPEARS TO BE UNREINFORCED MASONRY SHEAR WALLS. ADDITIONAL WIND AND SEISMIC LOAD INCREASES WILL NOT EXCEED 10% PER IBC 2006. DUE TO THE REMOVAL OF INTERIOR MASONRY BEARING WALLS, THE EXISTING CONSTRUCTION HAS BEEN REANALYZED PER THE IBC 2006 AND COMPLIES WITH CURRENT LATERAL FORCE REQUIREMENTS. NO LATERAL FORCE RESISTING SYSTEM ALTERATIONS OR ADDITIONS ARE REQUIRED.

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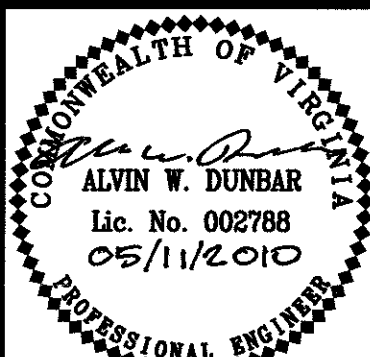


RAPPAHANNOCK
COMMUNITY COLLEGE
CAMPUS RENOVATIONS
WARSAW + GLENN, VIRGINIA
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GENERAL STRUCTURAL
NOTES

PERMIT
DRAWINGS

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REVISIONS	
NO.	DATE



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